

REMARKS

This Continuation Prosecution Application under 37 C.F.R. §1.53(d) and this Preliminary Amendment are responsive to the Office Action mailed June 6, 2000. A Petition for an extension of time accompanies this Continued Prosecution Application.

Reconsideration of the above-identified patent application in view of the filing date of this Continued Prosecution Application and this Preliminary Amendment is respectfully requested.

By the present amendment, claim 1 has been amended to delete the phrase "or a substrate for mounting electronic devices thereon and including a lead frame,".

In the Office Action mailed June 6, 2000, claims 1-4 and 6 were rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 5,687,901 to Hoshiba et al.

Claims 5, 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hoshiba et al. in view of U.S. Patent 5,762,258 to Le Coz et al.

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hoshiba et al in view of U.S. Patent No. 4,980,240 to Dunaway et al.

These rejections, as applied to the amended claims and this application, are respectfully traversed.

Hoshiba Is Not Prior Art

U.S. Patent No. 5,687,901 issued on November 18, 1987. The present application claims convention priority under 35 U.S.C. §119 from Japanese Patent Application No. 8-244268 filed in Japan on August 27, 1996, i.e., prior to the November 18, 1997 issue date of the Hoshiba et al. patent.

In order to complete the claim of convention priority under 35 U.S.C. §119, enclosed is an English language translation, under declaration, of priority Japanese Patent Application No. 8-244268 filed August 27, 1996.

In view of the claim to convention priority, it is submitted that the Hoshiba et al. patent cannot be prior art under 35 U.S.C. §102(a) or 35 U.S.C. §102(b).

The Hoshiba patent has an application filing date of November 18, 1997. Therefore, the Hoshiba patent can only be prior art under 35 U.S.C. §102(e).

For reasons hereinafter discussed, the applicants maintain that amended independent claim 1 is not anticipated by Hoshiba. The applicants also maintain that amended independent claim 1 is not obvious over Hoshiba even if Hoshiba is prior art.

Recent amendments to the patent laws provide that for applications filed after May 29, 2000, a commonly assigned patent is not prior art under 35 U.S.C. §102(e) for purposes of obviousness under 35 U.S.C. §103.

The Hoshiba patent is assigned to Nippon Steel Corporation, Tokyo, Japan. The assignment is recorded at Reel/Frame 7801/0220.

The present application is assigned to Nippon Steel Corporation, Tokyo, Japan. The assignment is recorded at Reel/Frame 9907/0818.

It is therefore submitted that the Hoshiba patent is not prior art under 35 U.S.C. §102(e) for purposes of 35 U.S.C. §103.

Patentability Over Hoshiba

It is submitted that the present invention, as defined in amended independent claim 1, is not disclosed or suggested by Hoshiba.

The present invention, as defined by amended claim 1, is directed to a method of partially plating a substrate for electronic devices, comprising arranging small balls at selected portions of a substrate for mounting semiconductor devices thereon and adhering or bonding the small balls thereto, and melting the small balls, thereby selectively plating the selected portions of the substrate for electronic devices with a different metal.

Hoshiba et al., in Fig. 50 and from column 23, line 65 to column 24, line 22, disclose that bumps are formed on electrode pads of a printed circuit board by using metal small balls and the bumps are then melted by heating to form a solder coating. Hoshiba et al., in Fig. 51 and

column 24, lines 27 to 37, also disclose supplying solder to a printed circuit board for mounting a semiconductor package.

Thus, Hoshiba et al., disclose a solder coating intended to solder-coat electrodes on a printed circuit board for mounting semiconductor packages or other electronic devices.

In contrast, the present invention partially plates electrodes on a substrate for mounting semiconductor chips directly thereon, as defined in claim 1 by the term "a substrate for mounting semiconductor devices" and embodied in Examples 2 and 3 in the form of a TAB tape and a lead frame, respectively. This feature is not disclosed or suggested by Hoshiba et al.

Moreover, the present invention effects the partial plating with a different metal to facilitate bonding of the semiconductor chips with other electronic devices. Hoshiba et al., do not disclose or suggest the positive use of a different metal but merely disclose solder or metal balls as an example of the means for bonding.

It is therefore submitted that amended independent claim 1 is patentable over Hoshiba et al.

The secondary references to LeCoz et al., and Dunaway et al., were cited in combination with Hoshiba et al., against various dependent claims. Since claim 1 is

patentable, it is submitted that dependent claims 2-9, which depend from claim 1, are also patentable.

CONCLUSION

It is submitted that in view of the present amendment and foregoing remarks, the application is now condition for allowance. It is therefore respectfully requested that the application be allowed and passed to issue.

Respectfully submitted,

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